

# WK 4900 Operation Manual Guide



**Software Name :** 4900UI.exe

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## **Disclaimer**

This software only provides the convenience of remote measurement. Users should pay close attention to the conditions of the instruments, fixtures and objects to be measured to avoid damage and disasters.

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## **Chapter 1 Software Introduction**

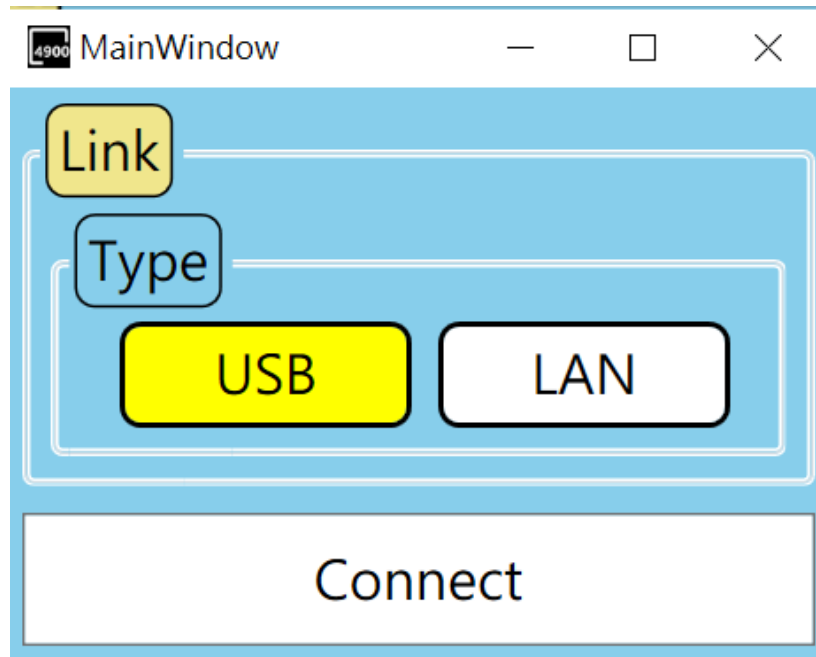
### **1.1 System Connection**

4900 UI Software only supports LAN cable connection.

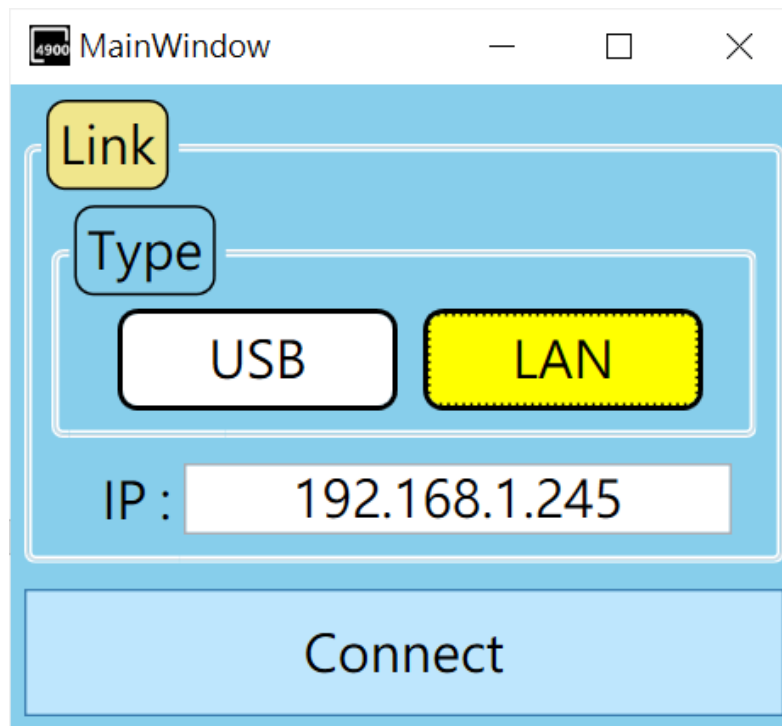
## **1.2 System function Introduction**

1. Supports external port connection (personal computer, laptop, tablet) to control 4900 instrument trigger and setting
2. 4900 user interface could directly modify testing settings (Mode, term, frequency, power speed)
3. Supports Data Logging Mode、Analysis Mode.
4. Support retrieve and save data and graph results (with USB key insert).
5. Support save preference for 4900 Instrument setting.
6. Support customization of external instrument


### 1.3 Login screen



Pic 1



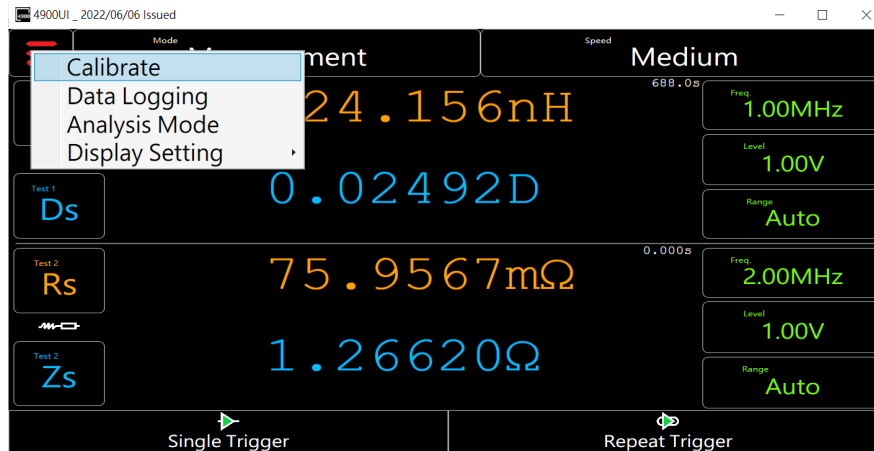
Pic 2 WK 4900UI Login screen, use LAN to connect.

;Click on  button, IP default setting is 192.168.1.245。



Pic 3 shows what a successful connections screen looks like. Close the window to disconnect.

## 1.4 Calibrate

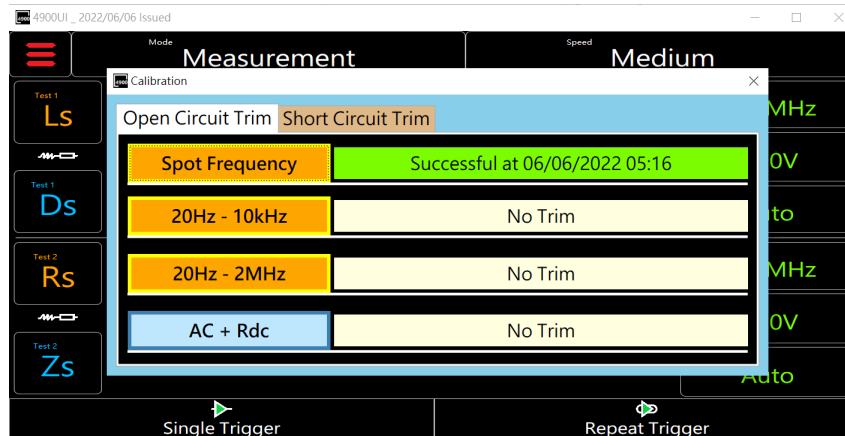


Pic 4 Other available functions

Before testing any electrical components, please first calibrate the instrument.

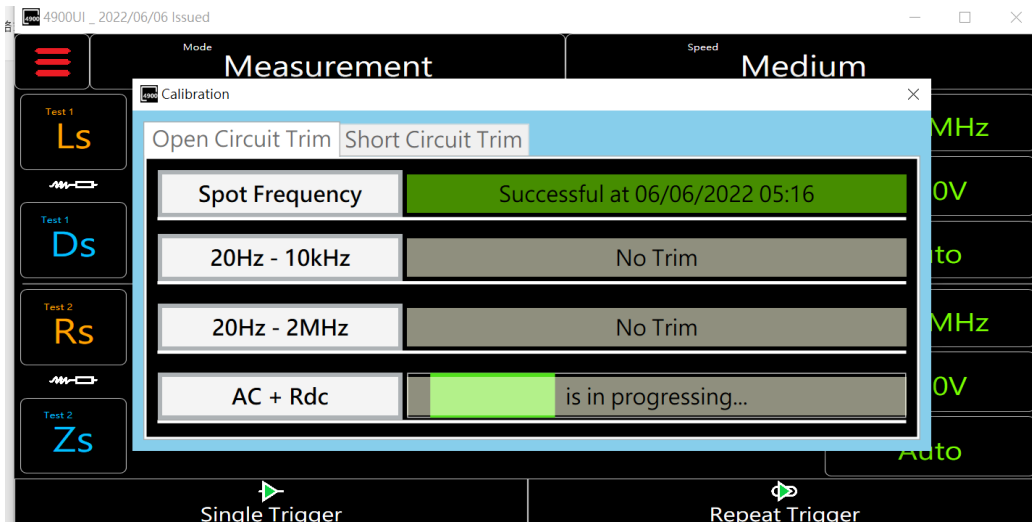


Click on top left menu bar , and choose the function “Calibrate”.



Pic 5 After click on “Calibrate”, The pop up screen will show

”Open Circuit Trim” as default setting. It is recommended to use AC+Rdc to calibrate first.

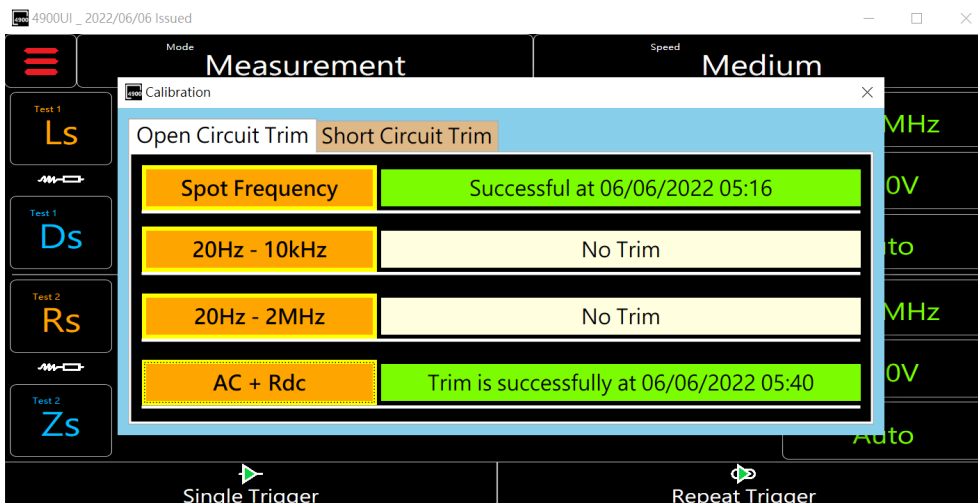


Pic 6 Currently executing AC+Rdc calibration

Double click on AC+Rdc(Orange bar),the calibration process will begin, AC+Rdc's Calibration will take longer than spot frequency, 20hz-10khz, and 20hz - 2mhz, because it contains all range of frequency.

Spot frequency = single frequency calibration

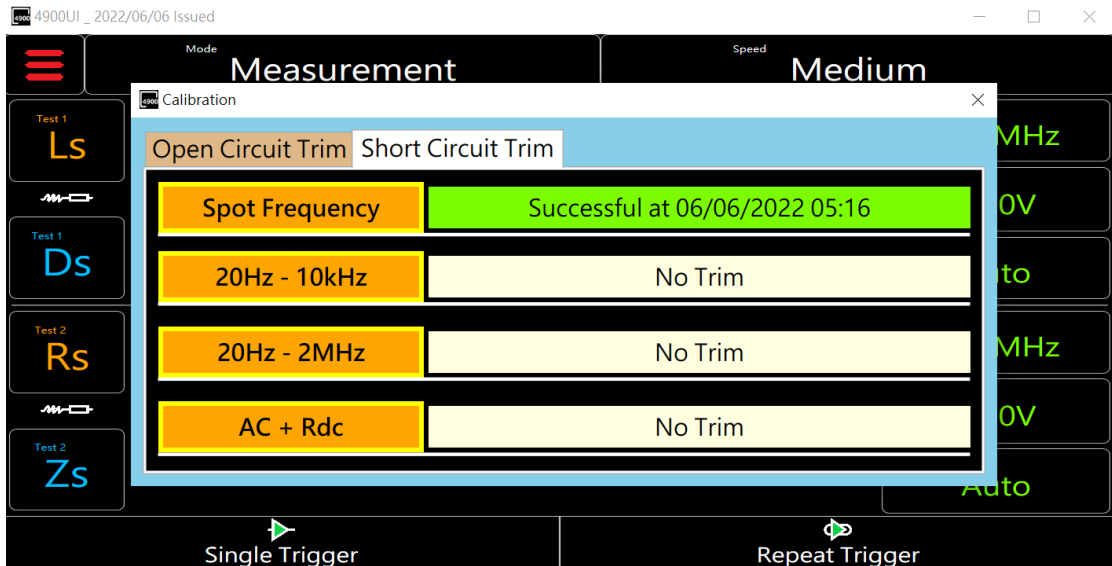
20hz – 10khz, 20hz – 2mhz = two popularly used frequency range calibration



Pic7 Successfully Calibrated

After calibrated, the screen will show “Trim is successfully” and the time that records the success. After calibrated Open Circuit Trim’s AC+Rdc, please click on “Short Circuit Trim” on the tab bar “





Pic 8 Choose Short Circuit Trim's tab bar

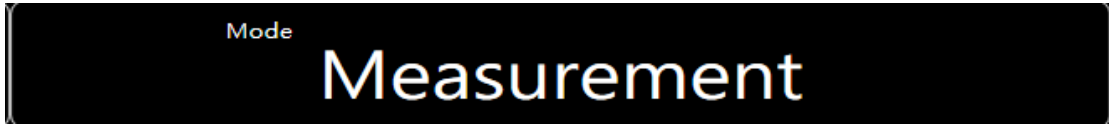
Similar to the steps of Open Circuit Trim, recommend to calibrate AC+Rdc first. After finish calibrating both Open Circuit Trim and Short Circuit Trim's AC+Rdc, close screen to return to home page.

### Precautions

Beside first time using 4900 instrument, if any component fixture is replaced or changed in the future, please ensure to calibrate both "Open Circuit Trim" and Short Circuit Trim" to guarantee the accuracy of the result.

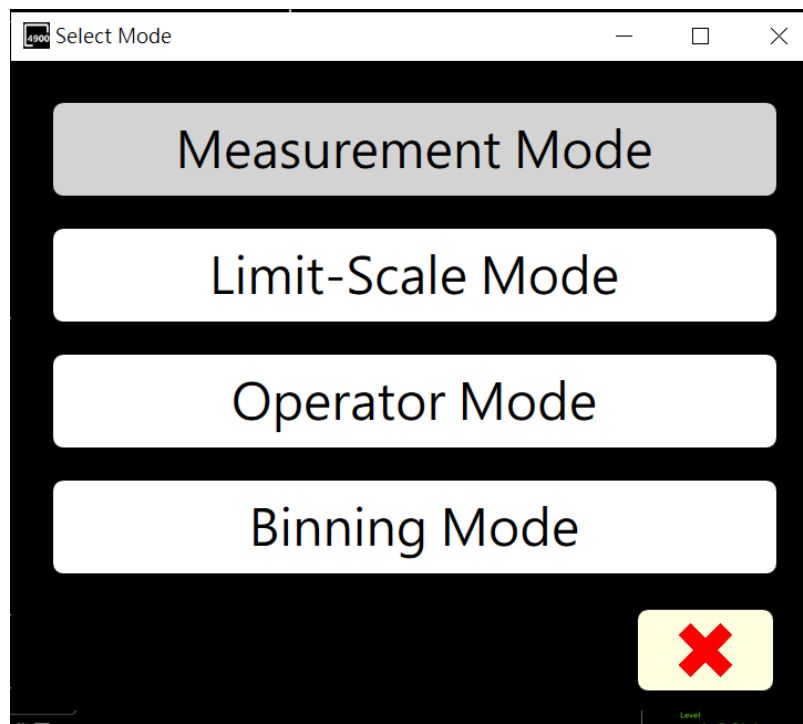
# Chapter 2 Running Unit Test

## 2.1 Measurement Mode



Pic 9 Click on this button to change mode, default set to “Measurement Mode”

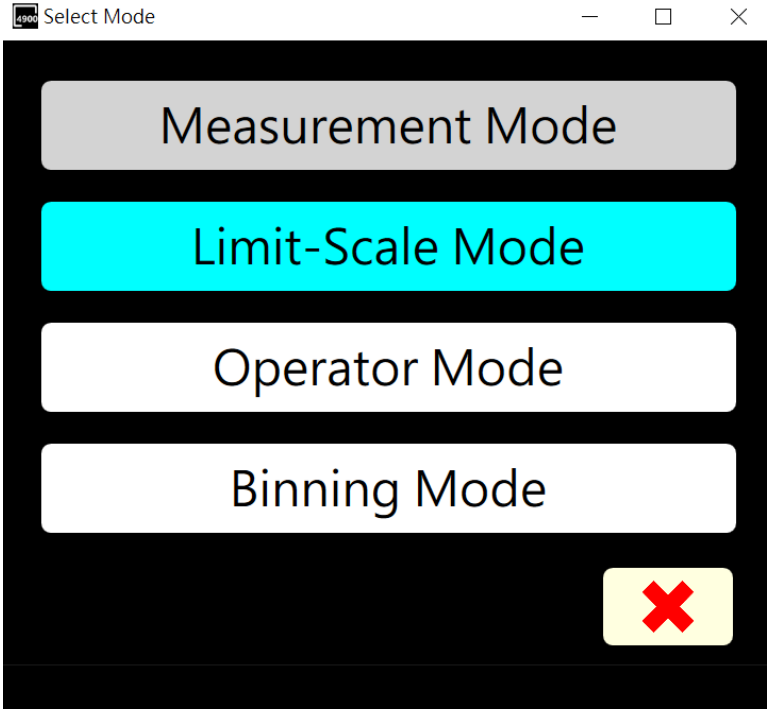
Measurement Mode is regular testing, doesn't include upper or lower limit



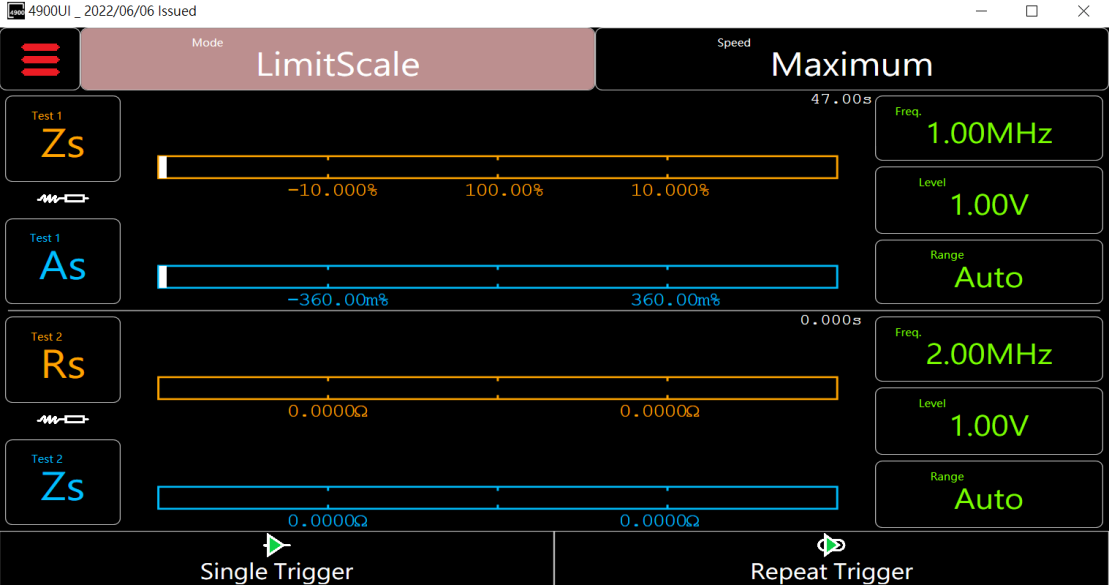
Pic 10 Double Click on Preference Mode to switch mode. When mode is being

switched, the pop up screen will automatically close.

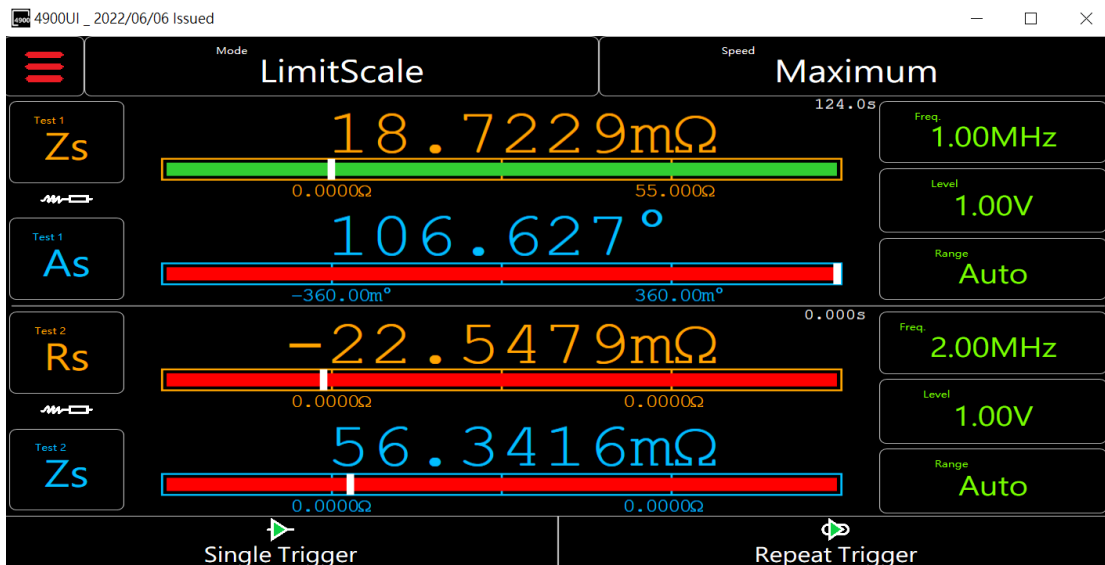
## 2.2 Limit Scale Mode/Operator Mode



Pic 11 Choose Limit – Scale Mode



Pic12 Limit Scale Screen before testing



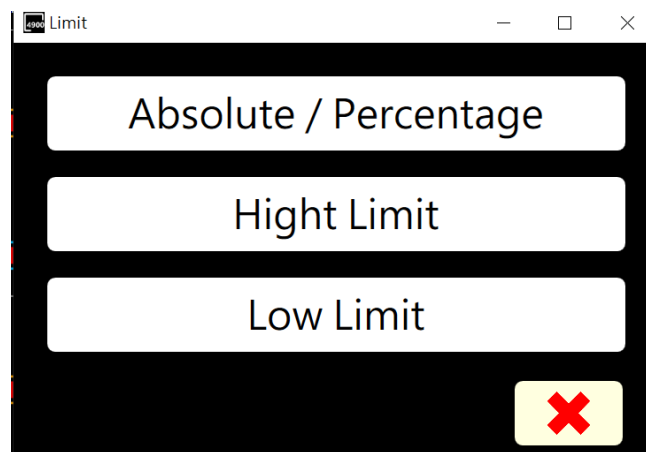
Pic13 The screen after triggered.

When the result is larger than the upper limit or less than the lower limit, the bar filled with red color implied failed

When the result is within the range of lower and higher limit, the bar filled with green color implied pass.



Pic 14 Press any point on the red bar to edit lower and upper limit value

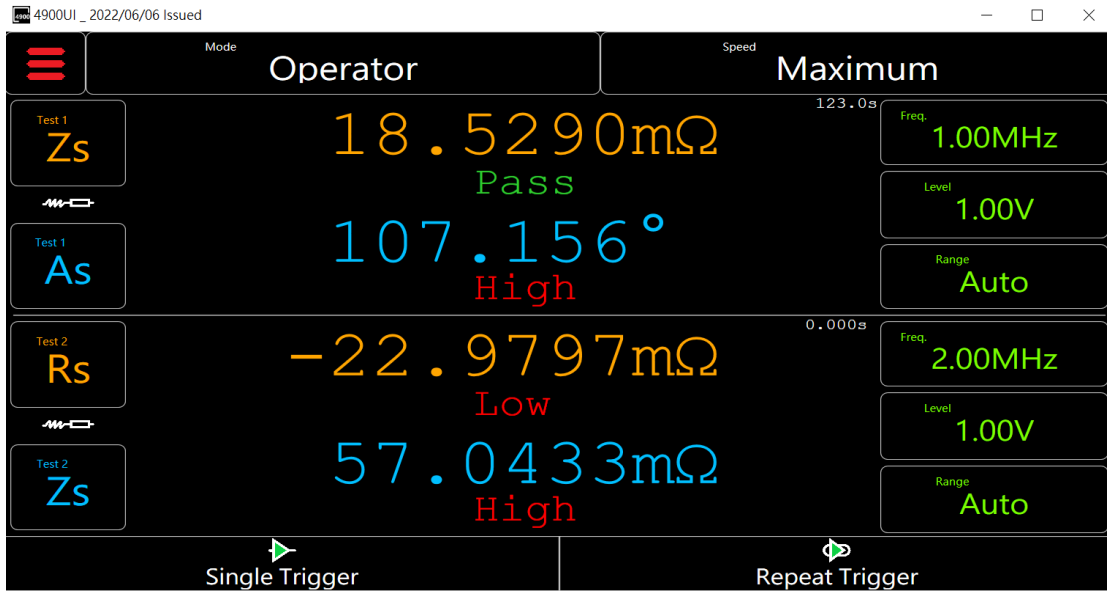


Pic 15 Limit pop up screen

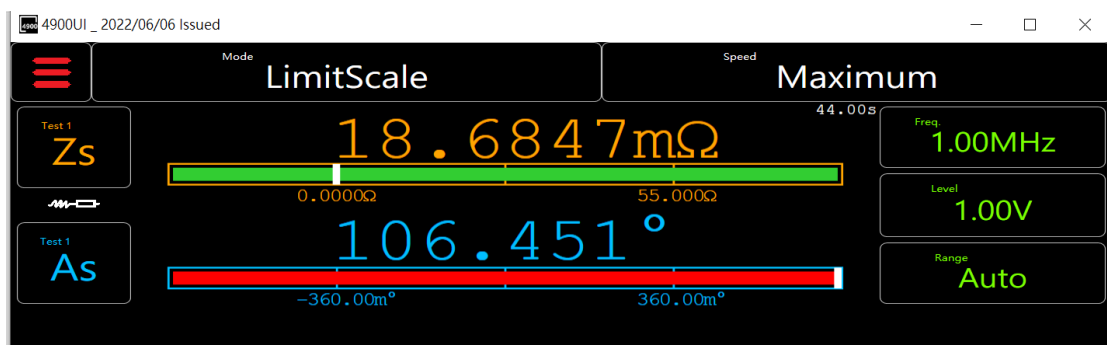
Click on “Absolute / Percentage” to switch mode

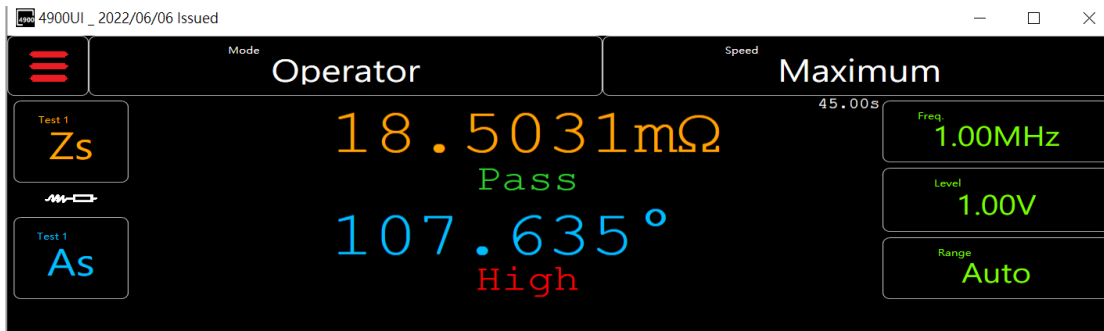
To determine what mode you currently is on, check the bar ‘s upper or lower limit’s unit. If its “%” then it is currently in percentage mode. If its “Ω” then it is currently in

Absolute Mode



Pic 16 When Mode switch to “Operator” mode and trigger onced.



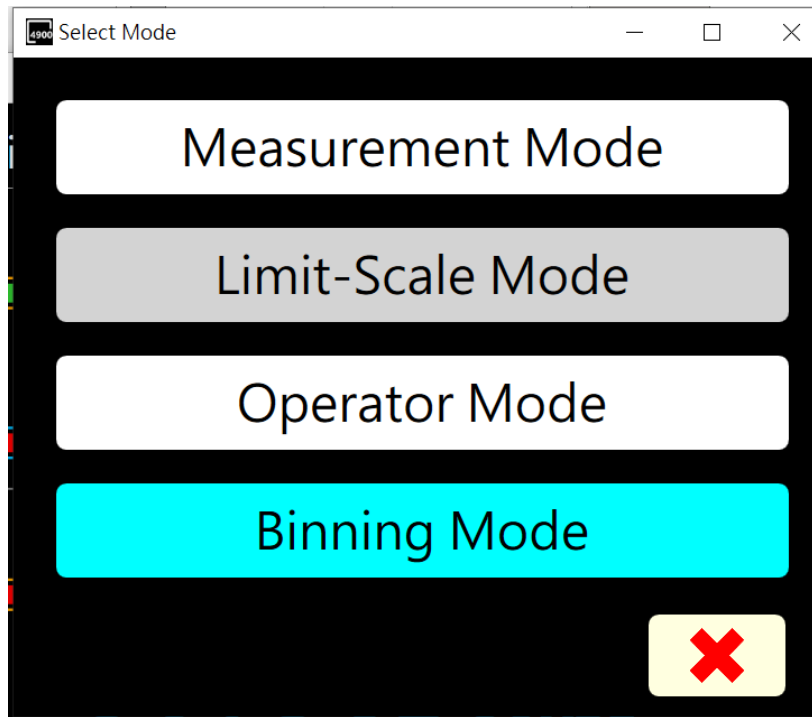


Pic 17 The comparison between Operator and Limit Scale mode with the same setting and UUT(unit under test)

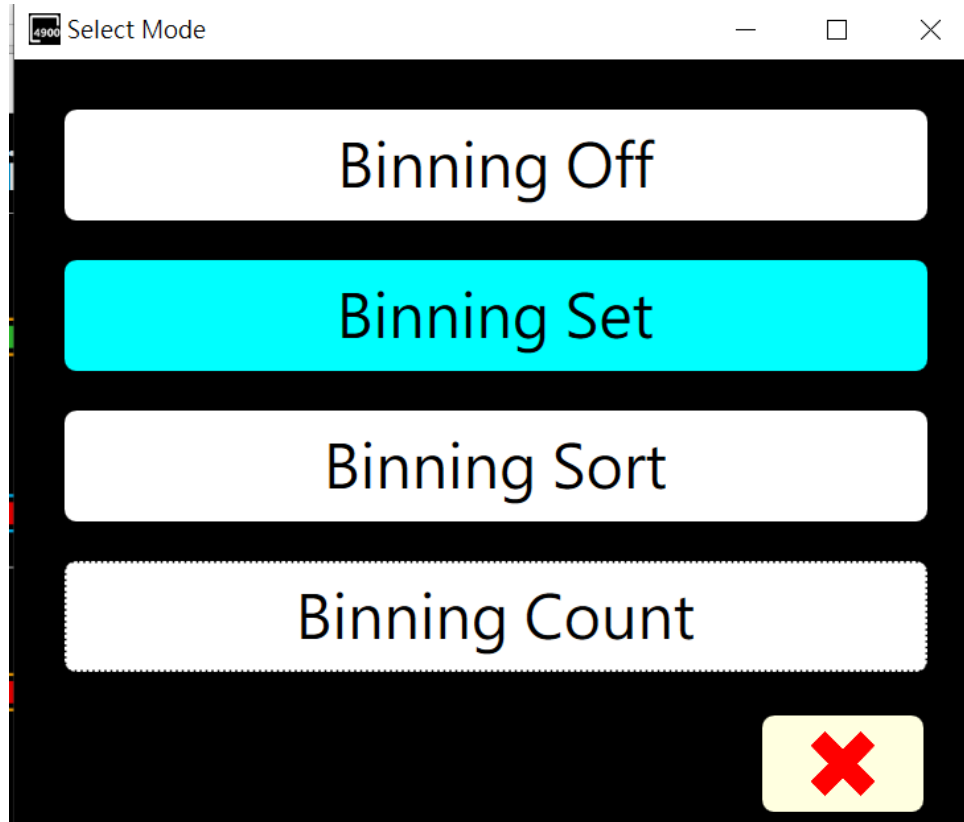
Operator Mode and Limit Scale has similar functions, the main difference is that in Operator Mode, it will directly tell user whether the data pass or not. In Limit Scale Mode, there will be a white line on the bar represent the result to show its relative position compare to upper and lower limit.

## 2.3 Binning Mode

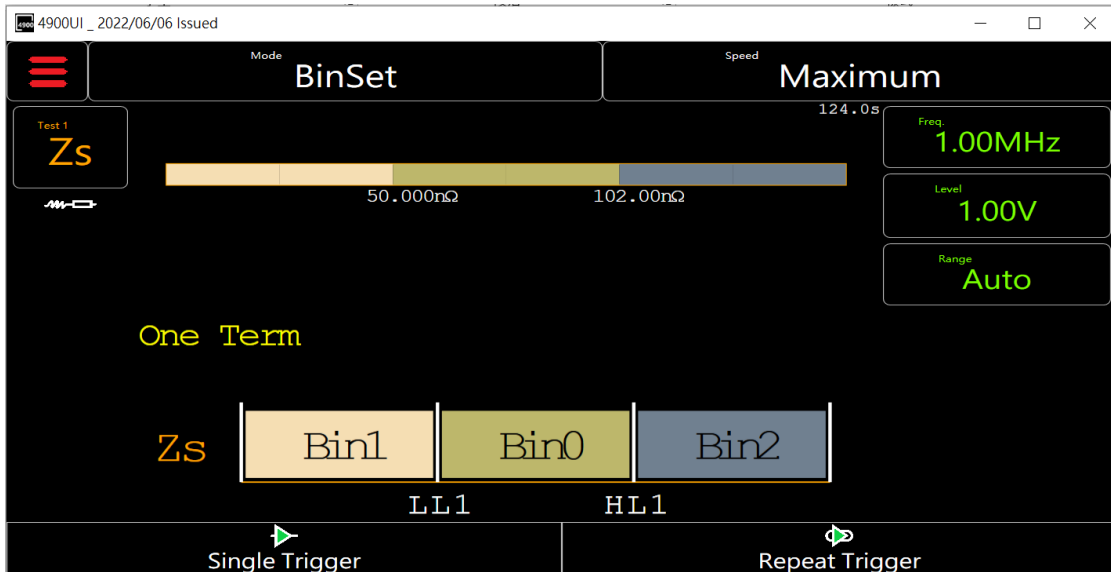
### 2.3.1 Binning Set



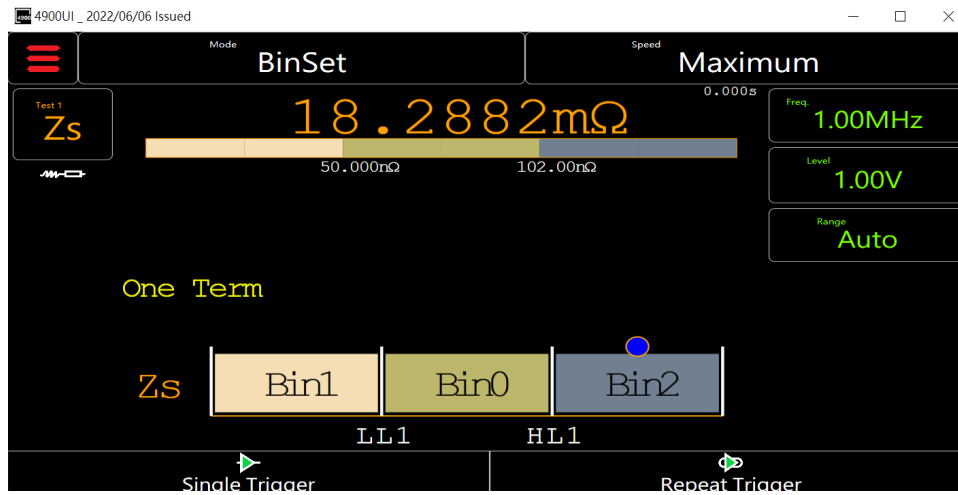
Pic18 Switch to Binning Mode



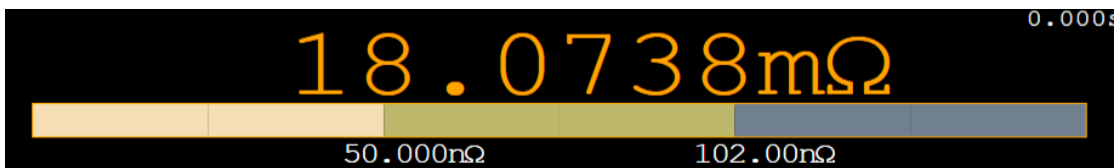
Pic19 Binning has three Mode: Binning Set, Binning Sort, and Binning Count



Pic 20 BinSet Mode with one term

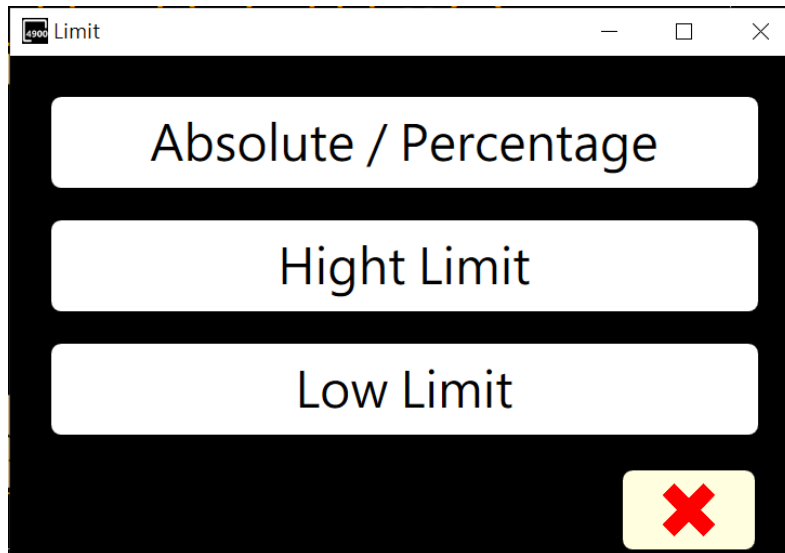


Pic 21 the screen after triggered with one term, The blue circle indicates which bin the result belong. In this case, it is categorized in Bin2

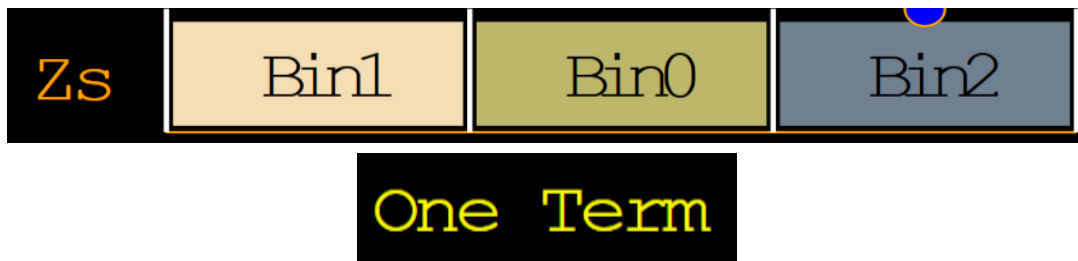


Pic 22 Click on any point around the bar can edit Bin0,Bin1,Bin2. Bin1 is the smallest value. Bin0 is the median, and Bin2 is the largest value.

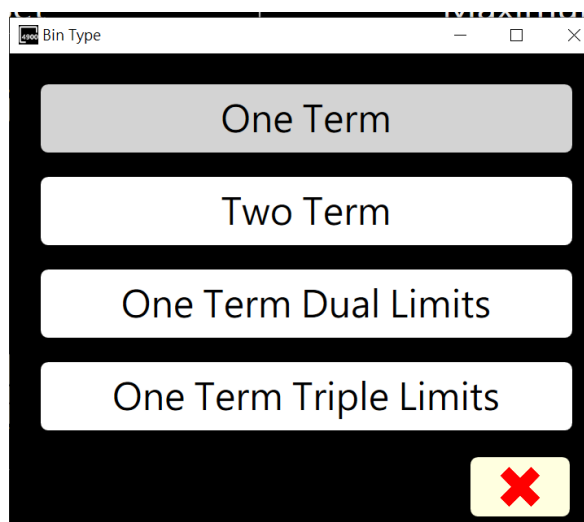




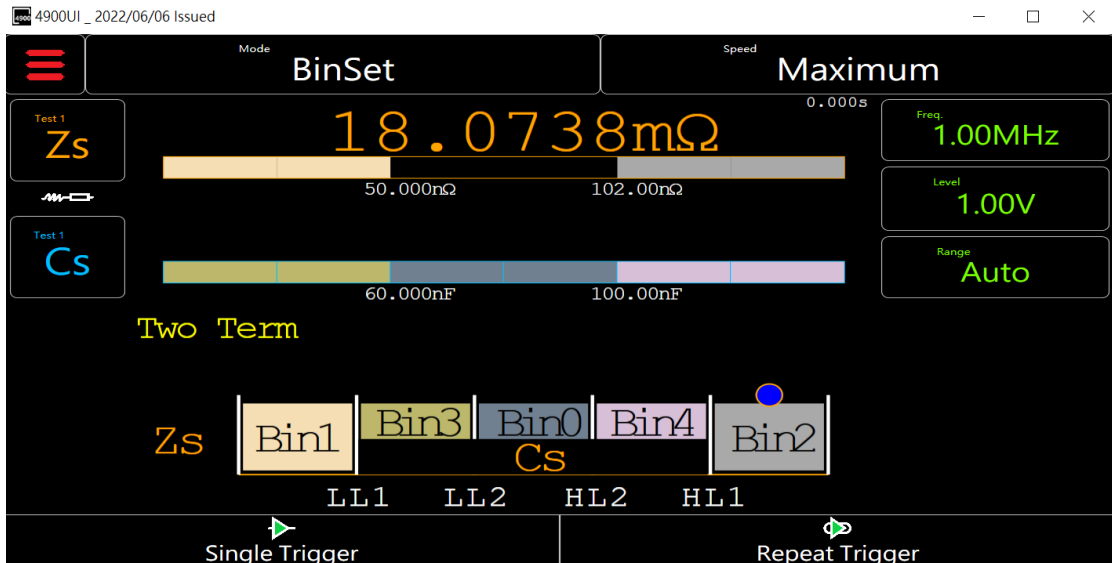
Pic 23 The screen to edit upper limit and lower limit



Pic 24 Click on any place above, user can change to the following: One Tern, Two Term, One Term Dual Limits, One Term Triple Limits



Pic 25 Change term pop up screen



Pic 26 Two term's testing environment



Pic 27 The black portion of the bar represents the combination of Bin3, Bin0, and Bin

4

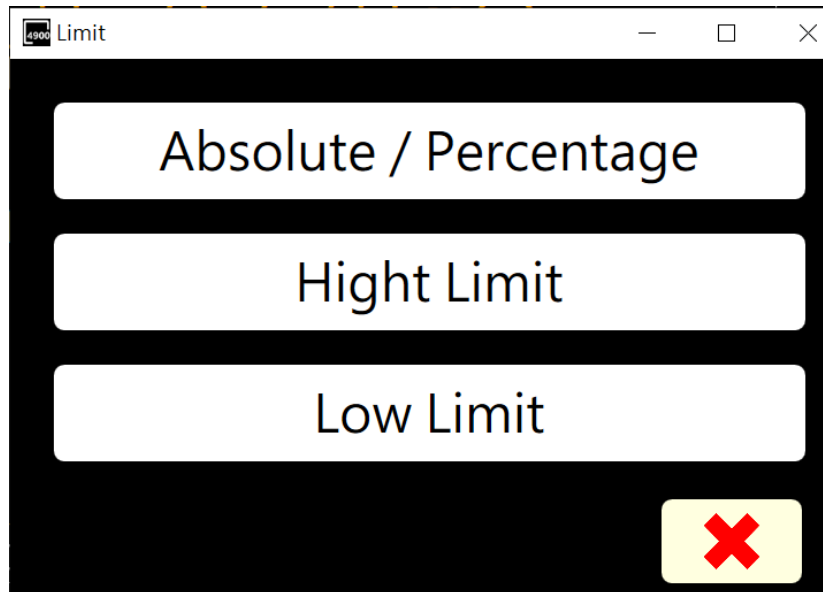


Pic 28 Contains Bin3, Bin 0, and Bin 4, the second bar can be seen as a zoom in version of the black section in the first bar. The bar is being separate from one bar to two bar, not two independent testing.

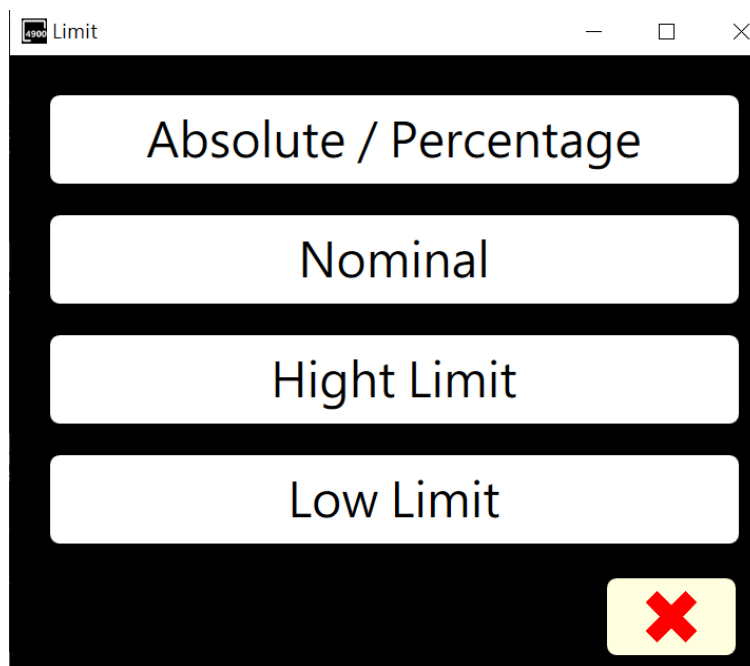
Clarification:

There are two bars in the screen, which originally there is only one bar, but purposely cut to two. The main reason to do this is to let the user see the result more clearly. Moreover, because there are 5 Bin bucket values user can change in Two term, we use two separate pop up screen to change bin bucket value. If user press anywhere near the first bar, user can change Bin1(minimum/Low Limit) and Bin2(Maximum/High

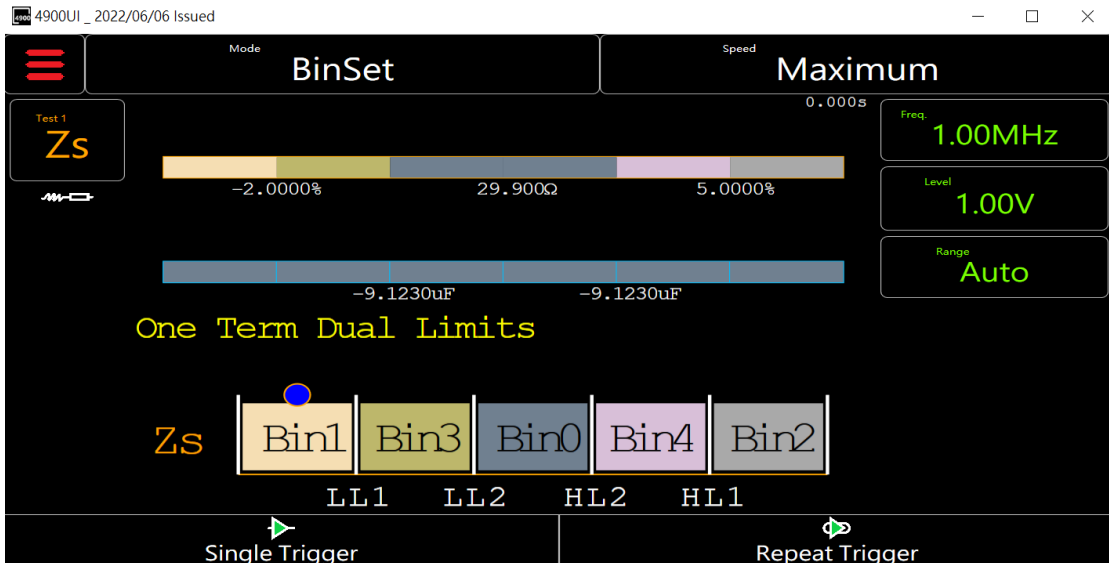
Limit). If user press anywhere the second bar, user can change Bin3(Low Limit), Bin0(Nominal), Bin4(High Limit).



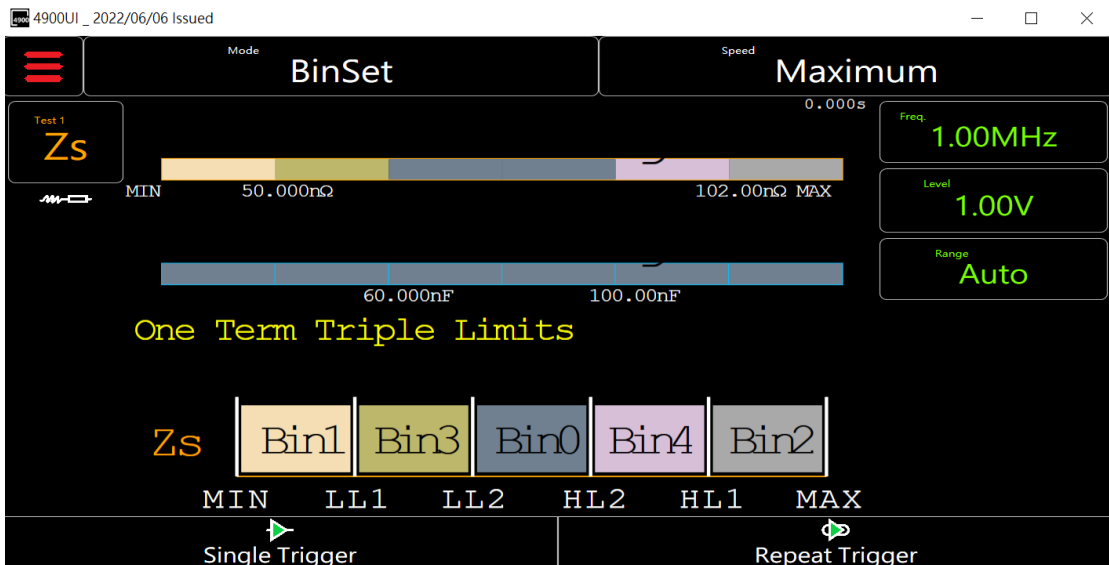
Pic 29 The pop-up screen after click on the first bar. User can change the value of Bin1(minimum/LL1), Bin2(HL1/High Limit). Double click on Absolute/Percentage to switch mode. To determine what mode you currently is on, check the bar 's upper or lower limit's unit. If its “%” then it is currently in percentage mode. If its “Ω” then it is currently in Absolute Mode



Pic 30 The pop-up screen after click on the second bar. User can change the value of Bin3(Low Limit/LL2), Bin0(Nominal), Bin4(High Limit/HL2)

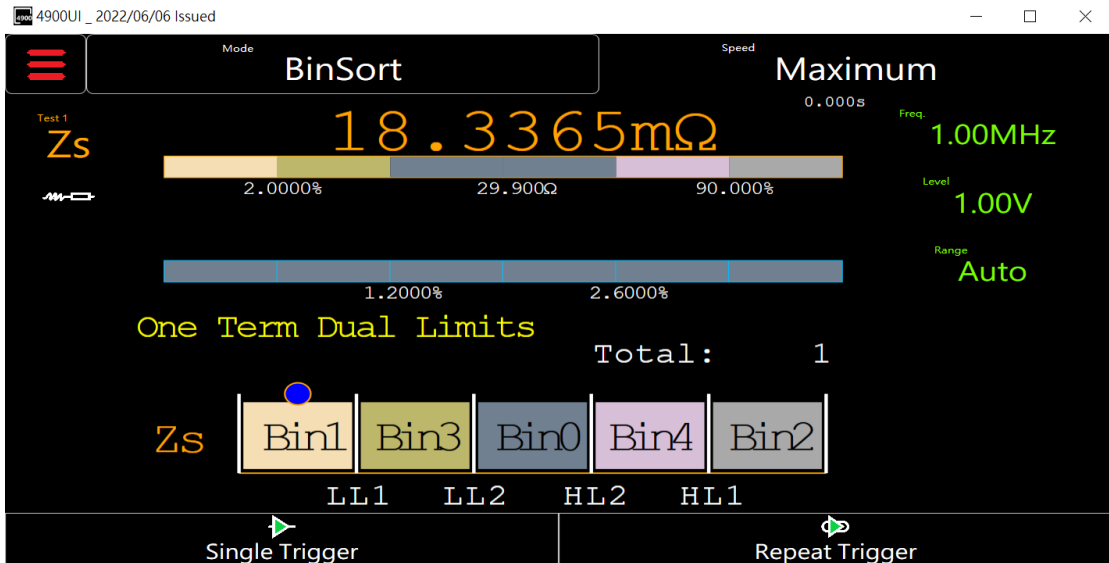


Pic 31 One Term Dual Limits screen, in the first bar, user can change the value LL1 and HL1, in the second bar, user can change LL2 and HL2



Pic 32 One Term Triple Limits screen, in the first bar, user can change MIN, LL1, HL1, MAX. In the second bar, user can change LL2, HL2

## 2.3.2 BinSort / BinCount



Pic 33 BinSort Mode screen, After every trigger, the screen will show its Result value and associate bin like other previous bin mode. The difference is it counts the total trigger amount on the bottom right.

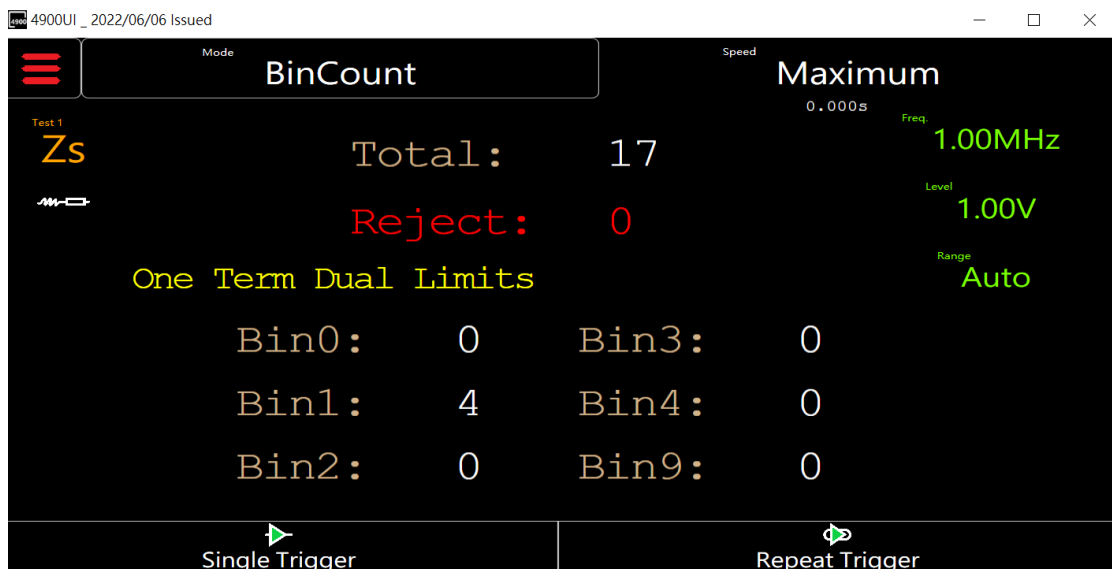
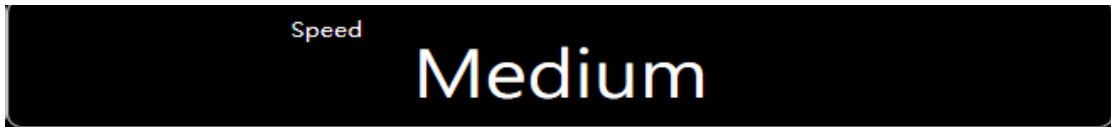
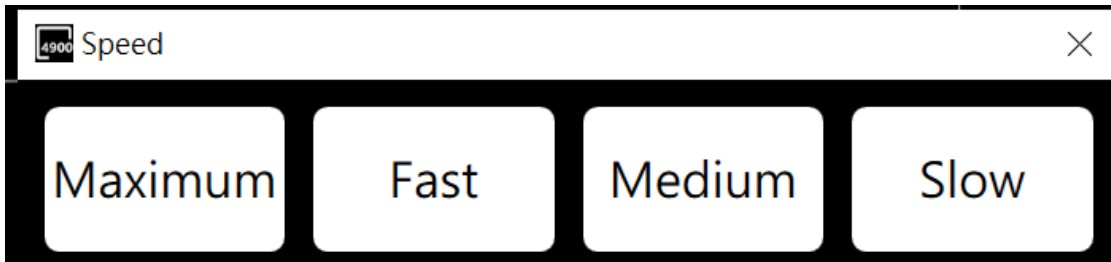


圖34 BinCount模式, 適合用於測試大量相同零件, 除了可以看total次數外, 也可以看每個bin分別分配多少個測試結果進而推算出該批產品的良率

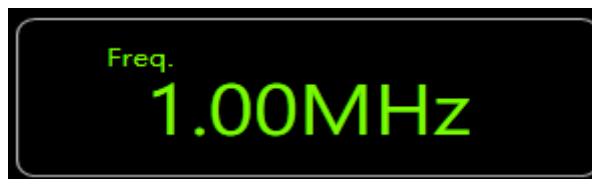
## 2.4 Speed / Frequency / Level / Terms



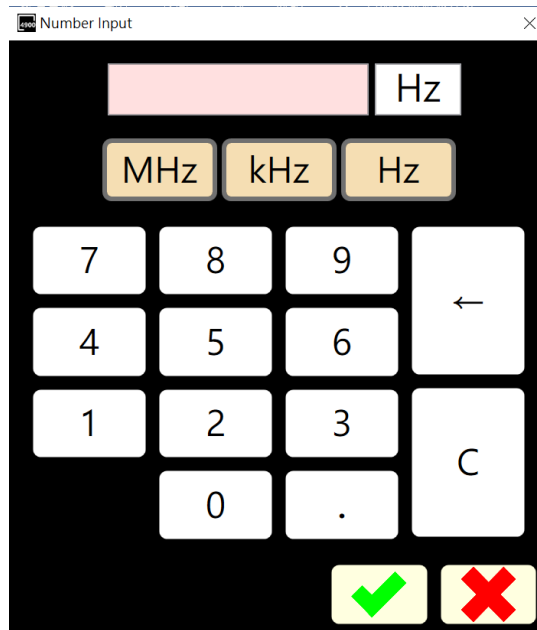
Pic 35 Click on Speed to change testing speed, default speed set to Medium



Pic 36 Speed pop-up screen, double click on preference mode to switch mode



Pic 37 Frequency pop-up screen, default set to 1.00Mz

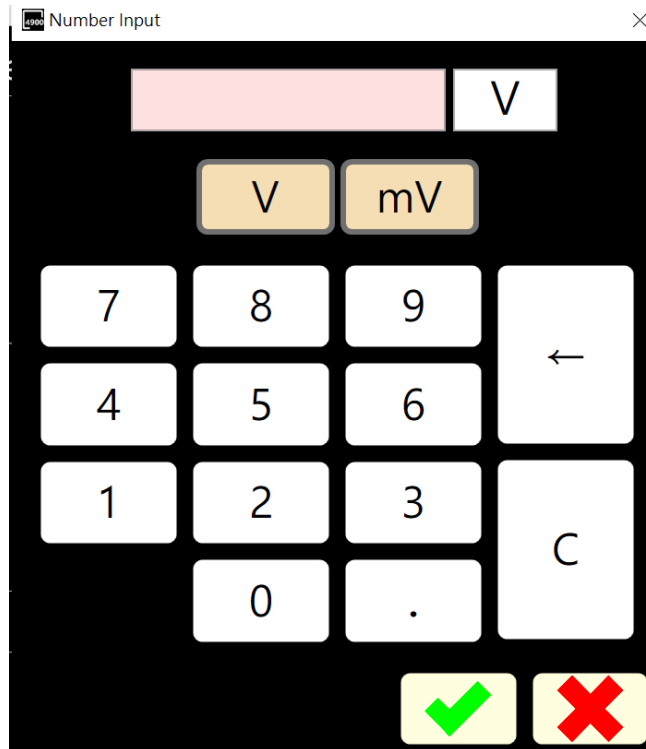


Pic 38 After insert desire number input, choose unit, click on green check to confirm

frequency



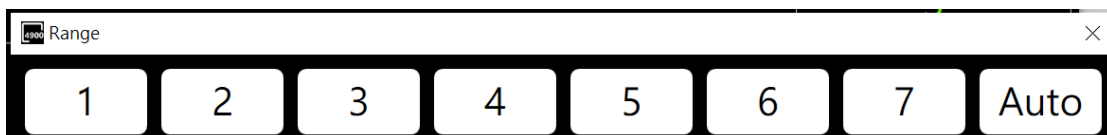
Pic 39 Click on Level to change voltage, default set to 1V



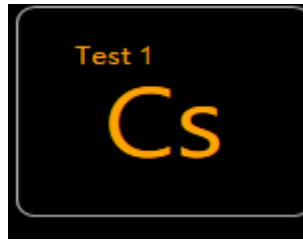
Pic 40 After insert desire number input and unit, click on green check to confirm



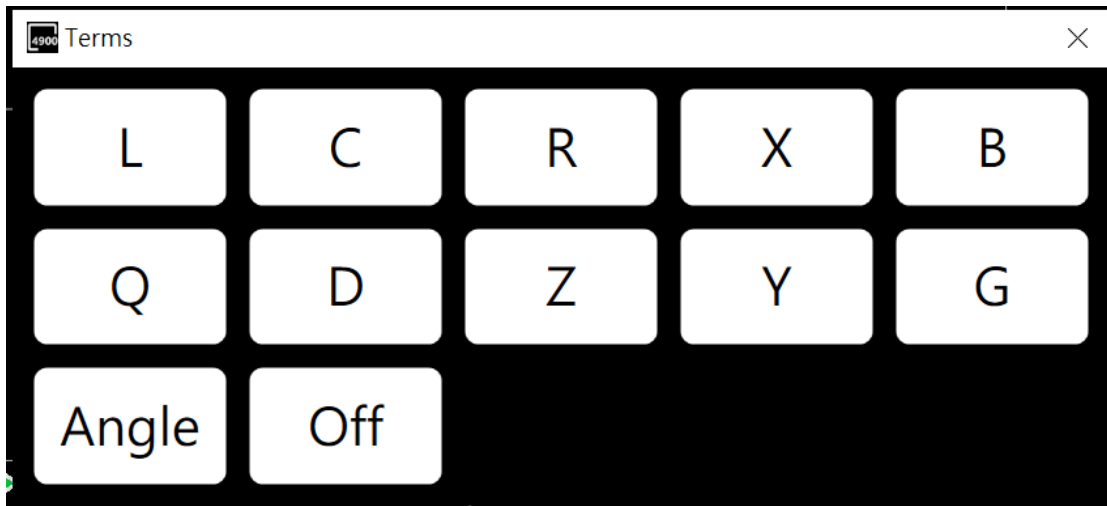
Pic 41 Click on Range to change Range, default range set to Auto



Pic 42 Modified Range pop-up screen



Pic 43 Click on Test1/Test2 to change testing term



Pic 44 Terms pop-up screen, double click on desire term to switch term

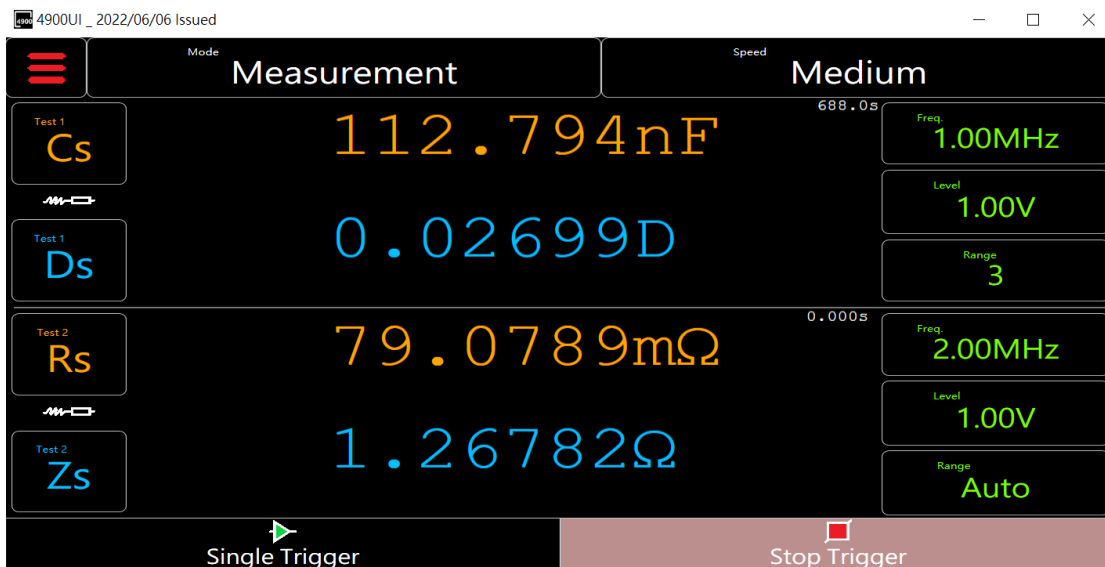
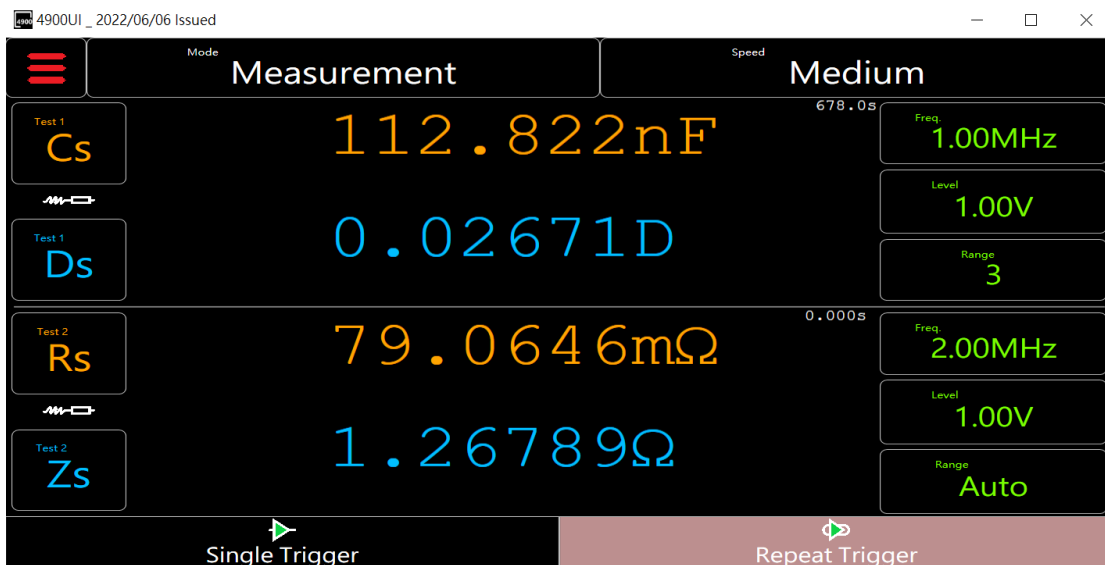


Pic 45 series connection (click once on the icon to switch to parallel connection)

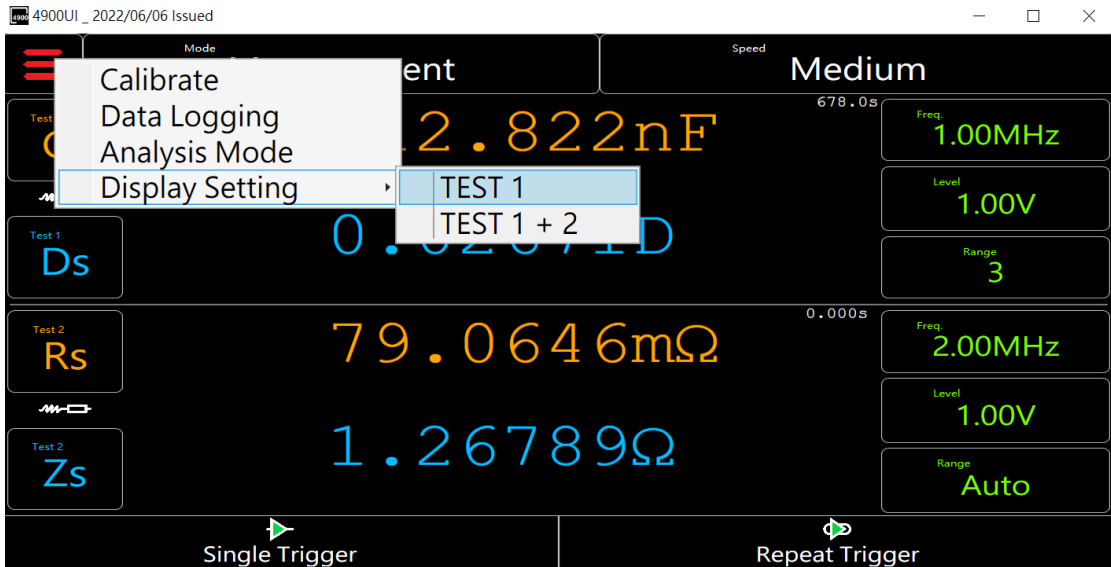


Pic 46 parallel connection (click once on the icon to switch to series connection)

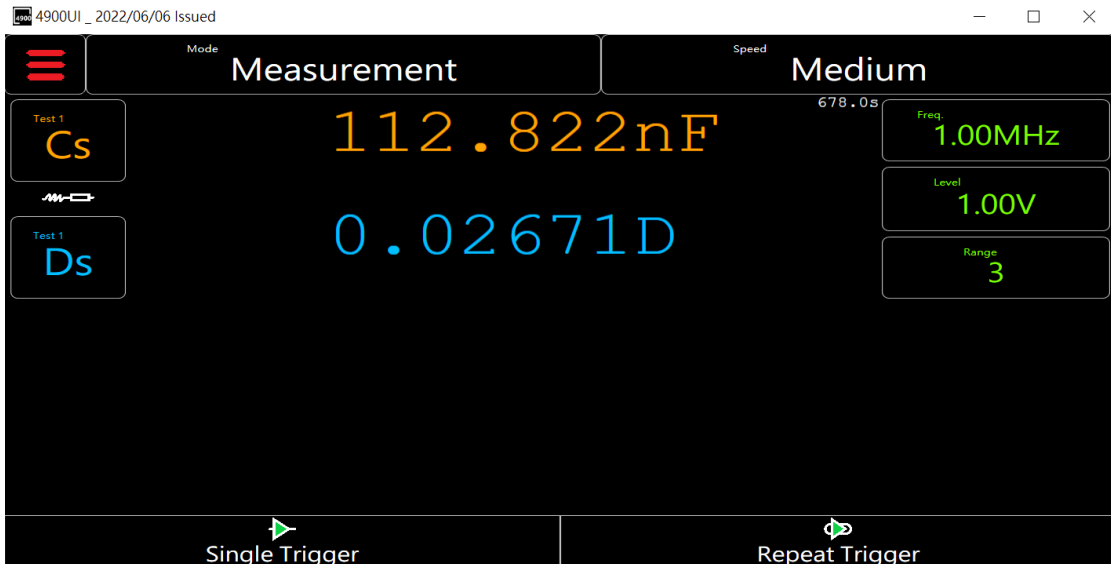




Pic 47 single trigger only runs the program once  
 Repeat trigger constantly rerun the program until the user press on stop trigger



Pic 48 4900 support two test with two terms each, display setting enable user to show one test or two test. This pic is an example of two test



Pic 49 This pic is an example of one test

## **Chapter 3 Technical Support**

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